

Serial Number: 10/604,756  
Filed: 8/14/2003

**BABCOCK IP**

**Claim Amendments**

1. (currently amended) A radome for a reflector antenna having a reflector with a vertex area, the radome comprising:

a central portion surrounded by an outer portion;

the central portion having a radius configured to focus a reflected component of an RF signal reflected by the reflector antenna to the vertex area; and

the outer portion having a radius greater than the central portion; and

the central portion consisting of a dielectric material.

2. (currently amended) The apparatus radome of claim 1, wherein a transition between the central portion and the outer portion is located at a position where the reflected component from the outer portion closest to the transition reflects from the reflector without intersecting with a feed assembly of the reflector antenna.

3. (currently amended) The apparatus radome of claim 1, wherein the radome is injection molded dielectric plastic.

4. (currently amended) The apparatus radome of claim 1, further including a plurality of tabs formed proximate a periphery of the radome;

the tabs configured to pass through a corresponding plurality of cut outs formed in a periphery of the reflector.

5. (currently amended) The apparatus radome of claim 4, wherein the tabs retain the radome on the reflector when the radome is rotated after the tabs are passed through the cut outs.

Serial Number: 10/604,756  
Filed: 8/14/2003

**BAELOCK IP**

6. (currently amended) The apparatus radome of claim 4, further including a plurality of support posts formed proximate the periphery of the radome which the reflector seats against when the tabs are passed through the cut outs.

7. (currently amended) The apparatus radome of claim 4, further including a plurality of locking clips configured to compress when the tabs are passed through the cut outs; the locking clips decompressing into the cut outs when the radome is rotated after the tabs are passed through the cut outs; the locking clips decompressed into the cut outs inhibiting further rotation of the radome.

8. (currently amended) The apparatus radome of claim 1, further including a plurality of absorbing retainers arranged proximate a periphery of the radome.

9. (currently amended) The apparatus radome of claim 1, further including RF absorbing material located in the vertex area.

10. (previously presented) A radome for a reflector antenna having a reflector with a vertex area, the radome comprising:

the radome adapted to cover an open end of the reflector; a plurality of tabs formed proximate a periphery of the radome; the tabs configured to pass through a corresponding plurality of cut outs formed in a periphery of the reflector.

11. (original) The apparatus of claim 10, wherein the tabs retain the radome on the reflector when the radome is rotated after the tabs are passed through the cut outs.

Serial Number: 10/604,756  
Filed: 8/14/2003

**SEARCHED** **INDEXED**

12. (original) The apparatus of claim 10, further including a plurality of support posts formed proximate the periphery of the radome which the reflector seats against when the tabs are passed through the cut outs.

13. (original) The apparatus of claim 10, further including a plurality of locking clips configured to compress when the tabs are passed through the cut outs; the locking clips decompressing into the cut outs when the radome is rotated after the tabs are passed through the cut outs; the locking clips decompressed into the cut outs inhibiting further rotation of the radome.

14. (original) The apparatus of claim 10, further including a plurality of absorbing retainers arranged proximate a periphery of the radome.

15. (original) A reflector antenna, comprising:  
a reflector with a vertex area;  
a feed assembly coupled to the reflector proximate the vertex area;  
a plurality of cut outs in a periphery of the reflector;  
a radome adapted to cover an open end of the reflector;  
the radome having a plurality of tabs arranged to correspond with the cut outs;  
the tabs and the cut outs co-operating to removably secure the radome to the reflector;  
the radome having a central portion with a radius selected to focus a reflected component of RF signals transmitted by the reflector antenna upon the vertex area; and  
the vertex area covered by an RF absorbing material.

16.(original) The reflector antenna of claim 15, further including a surrounding portion of the radome having a larger radius than the central portion.

Serial Number: 10/604,756  
Filed: 8/14/2003

**LOCKHED MARTIN CORPORATION**

17. (original) The reflector antenna of claim 15, further including a plurality of absorbing retainers proximate a periphery of the radome; the absorbing retainers retaining a ring of RF absorbing material.

18. (original) An antenna comprising:

a feed;

a reflector; and

a radome adapted to cover said reflector;

the reflector and radome having interlocking peripheral structures configured such that said radome is joined to said reflector by mating said structures and rotating said radome relative to said reflector.

19. (original) The antenna of claim 18 wherein one of said reflector and radome has cut-outs spaced about its periphery and the other has mating tabs adapted to be received into said cut-outs when said radome and reflector are mated before said rotating.

20. (original) An antenna comprising:

a self supported feed assembly;

a circular reflector; and

a circular radome adapted to cover said reflector;

the reflector and radome having interlocking peripheral structures configured such that said radome is joined to said reflector by mating said structures and rotating said radome relative to said reflector.

21. (original) A circular radome for a circular reflector antenna having about its periphery a twist-lock interconnection structure configured to interlock with a mating interconnection structure on the reflector when the radome is rotated relative to the reflector.

Serial Number: 10/604,756  
Filed: 8/14/2003

**babcock ip**

22. (original) A circular antenna reflector adapted to mate with a circular radome, the reflector having about its periphery a twist-lock interconnection structure configured to interlock with a mating interconnection structure on the radome when the radome is rotated relative to the reflector.